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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

HSIEH, SHIH WEN

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/676,583

Applicant(s)

BALCAN ET AL.

Examiner

Shih-wen Hsieh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 34-64 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 34-36, 38-44, 46-53, 55-61, 63 and 64 is/are rejected.
- 7) ☒ Claim(s) 37, 45, 54 and 62 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10-1-03; 4-1-04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 49 is objected to because of the following informalities:

A "." is missing at the end of this claim. Appropriate correction is required.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 34, 38 and 42 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,659,586 B2 ('586) in view of Anderson (US Pat. No. 6,293,648 B1). Both the instant application and the patent ('586) deal with a servicing plate used to service a

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non-scanning print head. Below is a table of claims comparison to indicate their likeness and difference:

<u>10/676,583</u>	<u>6,659,586 B2</u>
<p>34. A system for servicing a non scanning print head, the system comprising: a servicing plate; a servicing component mounted on the servicing plate and adapted to service the non-scanning print head; a first actuator adapted to move the non-scanning print head and the servicing plate in a first direction; and a second actuator adapted to move the servicing plate between a storage position and a service position in a second direction substantially perpendicular to the first direction, wherein the servicing component is spaced from the non-scanning print head when the servicing plate is in the storage position and the servicing component is adapted to service the non-scanning print head when the servicing plate is in the service position.</p> <p>38. the system of claim 34, further comprising: a drive feature; and a drive element adapted to interact with the drive feature to move the servicing plate between the storage position and the service position relative to the non-scanning print head.</p> <p>42. A system for servicing a non-scanning print head, the system comprising: a servicing plate; means mounted on the servicing plate for servicing the non-scanning print head; means for moving the non-scanning print head and the servicing plate in a first direction; and means for moving</p>	<p>1. A system for servicing a non-scanning print head supported by a print head mounting plate, the system comprising: a servicing plate; a servicing component mounted on the servicing plate and adapted to service the non-scanning print head; and a drive system including a drive block, a drive element, and a drive feature, the drive block connected to the servicing plate and adapted to move the servicing plate relative to the print head mounting plate, the drive element adapted to interact with the drive feature to move the servicing plate between a storage position and a service position relative to the non-scanning print head wherein the servicing component is spaced from the non-scanning print head when the servicing plate is in the storage position and the servicing component is adapted to service the non-scanning print head when the servicing plate is in the service position, and wherein the drive element includes a cam follower and the drive feature includes a cam slot adapted to receive the cam follower, wherein the cam slot is formed in the print head mounting plate and the cam follower is secured to the drive block.</p>

the servicing plate in a second direction between a storage position and a service position, wherein the second direction is substantially perpendicular to the first direction.	
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From the table above, subject matters in the instant application such as: non-scanning print head, servicing plate, servicing components, drive feature, drive element, means for mounting, means for moving, etc. are obvious over those in the patent ('586). The second actuator and the second means for moving in the instant application corresponds to drive block, drive element and drive feature in patent ('586).

The difference between the instant application and the patent ('586) is:

"a first actuator and the first means for moving adapted to move the non-scanning print head and the servicing plate in a first direction" is not disclosed in claim 1 of the patent ('586).

Anderson teaches a page-width print head (28, figs. 1 and 2) prints images on a medium mounted on a moving belt (22, fig. 1) passing underneath the head, this type of arrangement implies a non-scanning print head, refer to col.3, line 50 to col. 4, line 1. Anderson further teaches a controller (34, fig. 1) used to lift the head in a direction s indicated by double-head arrow (36, fig. 1) in a case where a service to the head is required, therefore, the head moves up to make a clearance between the head and the belt, refer to col. 4, lines 17-34.

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Balcon et al. to include a

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controller as taught by Anderson for the purpose of moving the head away from the belt (corresponds to a platen) so as to make a clearance in between and allowing a serving station to come into the clearance to service the head.

4. Claims 51 and 59 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of U.S. Patent No. 6,659,586 B2 ('586) in view of Anderson (US Pat. No. 6,293,648 B1). Both the instant application and the patent ('586) deal with a servicing plate used to service a non-scanning print head. Below is a table of claims comparison to indicate their likeness and difference:

<u>10/676,583</u>	<u>6,659,586 B2</u>
51. A printing system, comprising: a print head mounting plate; a non-scanning print head supported by the print head mounting plate; a servicing plate movably connected to the print head mounting plate; a servicing component mounted on the servicing plate and adapted to service the non-scanning print head; <u>a first actuator</u> adapted to move the print head mounting plate in a first direction; and a second actuator adapted to move the servicing plate between a storage position and a service position in a second direction substantially perpendicular to the first direction relative to the print head mounting plate, wherein the servicing plate is recessed within the print head mounting plate when the	15. A printing system, comprising: a print head mounting plate; a non-scanning print head supported by the print head mounting plate; a servicing plate movably connected to the print head mounting plate; a servicing component mounted on the servicing plate and adapted to service the non-scanning print head; and a drive system adapted to move the servicing plate between a storage position and a service position relative to the print head mounting plate, wherein the servicing plate is recessed within the print head mounting plate when the servicing plate is in the storage position, and wherein the servicing plate is spaced from the print head mounting plate when the servicing plate is in the service position.

servicing plate is in the storage position, and wherein the servicing plate is spaced from the print head mounting plate when the servicing plate is in the service position.	
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The discussion for the table above is the same as that for claims 34 and 42 above. First actuator in the bold-face and underlined portion above in the instant application is taught by Anderson and will not repeat here.

Claim 59:

This claim is the corresponding method claim to apparatus claim 51. For a method claim, the method steps are deemed to be made obvious by the functions of the structure in the combination discussed above.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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6. Claims 34-36, 40-44, 46, 52, 53, 56-58, 60, 61 and 64 are rejected under 35 U.S.C. 102(e) as being anticipated by Anderson (US Pat. No. 6,293,648).

In regard to:

Claim 34:

Anderson teaches:

A system for servicing a non-scanning print head, the system comprising:

a servicing plate (90, figs. 1 and 3), refer to col. 5, lines 3-4;

a servicing component (38, figs. 1 and 2) mounted on the servicing plate and adapted to service the non-scanning print head, refer to col. 4, lines 27-34;

a first actuator (34, fig. 1) adapted to move the non-scanning print head and the servicing plate in a first direction (36, fig. 1); and

a second actuator (34, fig. 1) adapted to move the servicing plate between a storage position and a service position in a second direction (40, figs. 1 and 2) substantially perpendicular to the first direction, refer to col. 4, line 27 to col. 5, line 31;

wherein the servicing component is spaced from the non-scanning print head when the servicing plate is in the storage position (refer to fig. 1 for storage position) and the servicing component is adapted to service the non-scanning print head when the servicing plate is in the service position, refer to col. 4, lines 27-34.

Claim 35:

Anderson further teach:

wherein the first direction (36, fig. 1) is substantially perpendicular to a face of the non-scanning print head.

Claim 36:

Anderson further teach:

wherein the second direction (40, figs. 1 and 2) is substantially parallel to a face of the non-scanning print head.

Claim 40:

Anderson further teaches:

wherein the servicing component includes a wiper (48, fig. 2) adapted to wipe the non-scanning print head, refer to col. 5, lines 38-57.

Claim 41:

Anderson further teaches:

wherein the servicing component includes a cap (38, figs. 1 and 2) adapted to cap the non-scanning print head, refer to col. 4, lines 27-34.

Claim 42:

A system for servicing a non-scanning print head, the system comprising:

a servicing plate;

means mounted on the servicing plate for servicing the non-scanning print head;

means for moving the non-scanning print head and the servicing plate in a first direction; and

means for moving the servicing plate in a second direction between a storage position and a service position, wherein the second direction is substantially perpendicular to the first direction.

Rejection:

This claim is rejected on the basis as set forth for claim 34 discussed above. In this claim "means for moving" (two places) correspond to the first and second actuators in claim 34. As to "means mounted on the servicing plate", this can be represented by numeral 90.

Claim 43:

The system of claim 42, wherein the first direction is substantially perpendicular to a face of the non-scanning print head.

Rejection:

The recitation of this claim is the same as that in claim 35 and is rejected on the basis as set forth for claim 35 discussed above.

Claim 44:

The system of claim 42, wherein the second direction is substantially parallel to a face of the non-scanning print head.

Rejection:

The recitation of this claim is the same as that in claim 36 and is rejected on the basis as set forth for claim 36 discussed above.

Claim 46:

wherein means for moving the servicing plate in the second direction includes means for spacing the means for servicing the non-scanning print head from the non-scanning print head when the servicing plate is in the storage position and positioning the means for servicing the non-scanning print head to service the non-scanning print head when the servicing plate is in the service position.

Rejection:

In this claim, "the means for servicing the non-scanning print head can be seen as either the wiper (48) or the cap (38). So under the control of controller (34), the servicing plate or the carriage (90) in Anderson's case will move the service station along direction (40) from the storage position as shown in fig. 1 to the servicing position, which is underneath the head (28).

Claim 52:

The printing system of claim 51, wherein the first direction is substantially perpendicular to a face of the non-scanning print head.

Rejection:

Rejected on the basis as set forth for claim 35 discussed above.

Claim 53:

The printing system of claim 51, wherein the second direction is substantially parallel to a face of the non-scanning print head.

Rejection:

Rejected on the basis as set forth for claim 36 discussed above.

Claim 56:

Anderson further teaches:

wherein the servicing plate and the servicing component form a service station (52, fig. 1), the non-scanning print head includes a plurality of non-scanning print heads (28, fig. 2) each supported by the print head mounting plate (Anderson does not teach a mounting plate, however, these print heads are inherently mounted on a structure), and

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the service station includes a plurality of service stations (38, 38, 38, 38, fig. 2) each adapted to service one of the plurality of non-scanning print heads, refer col. 5, lines 46-47 and col. 4, lines 27-34.

Claim 57:

Anderson further teaches:

wherein the second actuator (34) is adapted to move each of the plurality of service stations between the storage position and the service position, refer to col. 5, lines 27-31.

Claim 58:

Anderson further teaches:

wherein the plurality of non-scanning print heads are offset from each other and the plurality of service stations are correspondingly offset from each other, refer to col. 3, line 65 to col. 4, line 1.

Claim 60:

The method of claim 59, wherein the first direction is substantially perpendicular to a face of the non-scanning print head.

Rejection:

Rejected on the basis as set forth for claim 35 discussed above.

Claim 61:

The method of claim 59, wherein the second direction is substantially parallel to a face of the non-scanning print head.

Rejection:

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Rejected on the basis as set forth for claim 36 discussed above.

Claim 64:

Anderson further teaches:

wherein supporting the non-scanning print head includes supporting the non-scanning print head relative to a platen (22, fig. 1), and wherein moving the print head mounting plate includes moving the print head mounting plate relative to the platen and spacing the print head mounting plate from the platen, refer to fig. 1, col. 4, lines 27-34.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 38, 39, 47-50, 55 and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson.

In regard to:

Claim 38:

Anderson teaches the service station move in a direction as indicated by double-head arrow (40) without further teaching how such a linear movement (in direction indicated by 40) is implemented.

Therefore, the device of Anderson DIFFERS from claim 38 in that it does not teach:

a drive feature; and

a drive element adapted to interact with the drive feature to move the servicing plate between the storage position and the service position relative to the non-scanning print head.

A linear movement can be implemented in a number of ways, such as rack and pinion. In this case, the rack and pinion corresponds to the drive feature and drive element respectively, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

Therefore it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify the device of Anderson to use features

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such as rack and pinion to produce a linear movement. In the instant case, the servicing plate can be mounted or connected with the rack, so that when the pinion is rotated (by a power source), the rack and the servicing plate will move linearly.

Claim 39:

The device of Anderson DIFFERS from claim 39 in that it does not teach:

wherein the service position includes a first service position and a second service position, wherein the second actuator is adapted to move the servicing plate between the first service position and the second service position.

The first and the second service positions can be seen as the head serviced by the capping assembly and the wiping assembly respectively. The second actuator is the function of the Anderson's controller (34), and each movement between positions is represented by arrows 40 and 46 respectively.

Therefore it would have been an obvious matter that Anderson did teach the first and the second positions, although in an implicit way, and the movements are represented by arrows 40 and 46 respectively.

Claim 47:

Anderson teaches the service station move along linear direction (40) without further teaching whether this movement is guided.

Therefore the device of Anderson DIFFERS from claim 47 in that it does not teach:

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wherein means for moving the servicing plate in the second direction includes means for guiding the servicing plate between the storage position and the service position.

As discussed above for claim 38, the rack and pinion is a guided motion, in which the tooth of the pinion and the tooth of the rack are meshed, so when the pinion is rotated, the rack moves in a guided way, refer to MPEP 2144.03, In re Malcolm, 129 F.2d 529, 54 USPQ 235 (CCPA 1942).

Therefore it would have been an obvious matter that the second direction movement must have been in a guided manner so that the service station will be able to service the head, e.g., cap can cover the head, wiper can make interference contact with the head and wipes the head.

Claim 48:

The device of Anderson DIFFERS from claim 48 in that it does not teach:

wherein the service position includes a first service position and a second service position, wherein means for moving the servicing plate in the second direction includes means for moving the servicing plate between the first service position and the second service position.

Anderson's capping situation can be seen as the first service position, and Anderson's wiping situation can be seen as the second service position, and the controller (34) will control the switching between the first and the second positions.

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Therefore, although Anderson does not specifically teach the first and the second service positions, the arrangements as shown in figs. 1 and 2 obviously reveal such positions and the switching between them.

Claim 49:

Anderson further teaches:

wherein means for servicing the non-scanning print head includes a wiper (48) for scraping the non-scanning print head and a cap (38) for sealing the non-scanning print head.

Claim 50:

The system of claim 49, wherein means for moving the servicing plate in the second direction includes means for servicing the non-scanning print head with the wiper when the servicing plate is in the first service position and servicing the non-scanning print head with the cap when the servicing plate is in the second service position.

Rejection:

This claim is rejected on the basis as set forth for claims 48 and 49 discussed above. The first and the second positions are randomly selected as indicated in claim 48 above. However, the first service position can be assigned as a wiping position.

Claim 55:

The printing system of claim 51, further comprising:

a drive feature; and

a drive element adapted to interact with the drive feature to move the servicing plate between the storage position and the service position.

Rejection:

Rejected on the basis as set forth for claim 38 discussed above.

Claim 63:

The device of Anderson DIFFERS from claim 63 in that it does not teach:
mounting a second servicing component on the servicing plate.

The arrangement as shown in fig. 2, where the wiper assembly and the cap assembly can be mounted in a single structure, so the cap assembly moves along linear direction 40 under the control of the controller (34) in a capping situation, and after capping, the capping assembly moves away from the head also along linear direction 40, then the wiper assembly move also the control of the control (34) along linear direction (46, fig. 2).

Therefore it would have been an obvious matter that the capping assembly and the wiping assembly as shown in fig .2 can be mounted in a single structure, their respective movement will not interfere each other in such arrangement, refer to MPEP 2144.04 V B.

Anderson further teaches:

moving the servicing plate between the first service position and a second service position (represented by arrows 40 and 46 respectively), including servicing the non-scanning print head with the second servicing component (either the cap 38 or the wiper 48) when the servicing plate is in the second service position.

Allowable Subject Matter

9. Claims 37, 45, 54 and 62 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter:

In regard to:

Claim 37:

The primary reason for the allowance of claim 37 is the inclusion of the limitation of wherein the first actuator is adapted to move the non-scanning print head and the servicing plate in a combined direction including the first direction and the second direction. It is this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claim 45:

The primary reason for the allowance of claim 45 is the inclusion of the limitation of wherein means for moving the non-scanning print head and the servicing plate in the first direction includes means for moving the non-scanning print head and the servicing plate in a combined direction including the first direction and the second direction. It is

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this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claim 54:

The primary reason for the allowance of claim 54 is the inclusion of the limitation of wherein the first actuator is adapted to move the print head mounting plate in a combined direction including the first direction and the second direction. It is this limitation found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.

Claim 62:

The primary reason for the allowance of claim 62 is the inclusion of the method step of moving the print head mounting plate includes moving the print head mounting plate in a combined direction including the first direction and the second direction. It is this step found in this claim, as it is claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SHIH-WEN HSIEH
PRIMARY EXAMINER


Shih-wen Hsieh
Primary Examiner
Art Unit 2861

SWH


Jan. 19, 2005